Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

Report upon the Geology and Mining Industry of Leadville, Col., by S. F. Emmons, contains thorough details of the Palæozoic and eruptive Mesozoic rocks of the district, and of the ores, which principally occur underneath a porphyry sheet and chiefly in cavities penetrating the "Blue" limestone, the lowest member of the carboniferous.

MINERALOGY.[1]

CHROME TOURMALINE. — Cossa and Arzruni describe in the *Zeitschrift fur Krystallographie* a new variety of tourmaline, in which chromic oxide replaces a portion of the alumina. The tourmaline, of a deep green color, occurs in deposits of chromic iron in the Ural mountains. The crystals have a beautiful dichroism, appearing, when viewed by daylight, yellow brown, parallel to the optic axis, and blue-green at right angles to the axis. Viewed by lamplight the yellow-brown color changes to ruby-red, and the green color nearly disappears. The result is, that the crystals are green by daylight and intense red by lamplight—a phenomenon shared by alexandrite.

The chrome tourmaline has a specific gravity of 3.120. Before the blowpipe it melts somewhat easily to a grayish-white, opaque bead. With borax and salt of phosphorus it gives a fine green bead, and in the latter flux a skeleton of silica. It is only decomposed by acids after fusion. The analysis was as follows:

SiO_2	Bo_3	Al_2O_3	Cr_2O_3	FeO	MgO	CaO	NaO	H_2O	F	
36.79	9.51	30.51	10.86	2.91	4.47	.72	1.36	2.25	.65	= 100.08

It is to be classed in the third group of tourmalines of Rammelsberg's classification.

PARAFFINE IN LAVA.—O. Silvestri has found that the basaltic lava in the neighborhood of Etna, contains small geodes filled with solid crystallized paraffine. The paraffine is in large translucent plates of waxy appearance and yellowish-white color, with a melting point of 56°. It is soluble in ether and in boiling alcohol.

NEW LOCALITIES. — A. Schmidt describes small transparent crystals of *newberyite* from Mejellones, Chili. They occur in crevices in guano, and having bright lustrous faces, could be accurately measured in the reflecting goniometer. They are orthorhombic in tabular crystals, with a hardness somewhat more than 3, and a specific gravity of about 2.10. Newberyite had previously been found in Victoria, Australia.

Damour gives an analysis of *fuchsite* from the Urals, and Arzruni describes its physical properties.

Mendozite, a sodium alum, occurs in the province of Idzumo, Japan, in considerable quantity, as an efflorescence upon albite.

---

[1] Edited by Professor H. CARVILL LEWIS, Academy of Natural Sciences, Philadelphia, to whom communications, papers for review, etc., should be sent.

It is found in two forms, the one massive, finely fibrous, grayish-white and translucent; the other as friable opaque tears slightly colored by iron salts. It contains, as shown by Dr. Divers, twenty-four molecules of water, and is thus of the normal type.

A RELATION BETWEEN THE OPTICAL AND CHEMICAL PROPERTIES OF PYROXENE AND AMPHIBOLE.—F. J. Wiik has found a very interesting relation between the optical and chemical properties of the pyroxenes and amphiboles of Finland. The angle between the axes of greatest and least elasticity has a direct relation to the amount of ferrous oxide in pyroxene or the amount of alumina in amphibole, the angle becoming larger as the percentage of these substances increases.

Specimens from a large number of localities were examined with unvarying result. The following are examples:

PYROXENE.

Locality.	Optic angle.	Percentage of FeO.
Wampula (yellowish malacolite)	37°	.99
Karis-Lojo (gray-green malacolite)	39°	2.68
Helsingfors (green pyroxene)	42° 30′	10.38
Pargas (black augite)	43° 30′	15.75
Lojo (black malacolite)	48°	27.50

AMPHIBOLE.

Locality.	Optic angle.	Percentage of FeO.
Orijäroi (light-green actinolite)	17°	1.69
Orijäroi (dark-green actinolite)	18° 30′	5.10
Pargas (black hornblende)	24° 30′	11.92 13.75
Korpo (light-green hornblende)	27° 30′	20.10 20.73

NEW MINERALS.—Two new minerals from Wermland, Sweden, are described by Igelström:

Manganbrucite.—This is a massive, uncleavable substance of a yellow or brownish-red color, which occurs in small grains imbedded in the manganese ore of the Jakobsberg mines. It is associated with a number of manganese minerals. It contains

MgO	MnO	H_2O		
57.81	14.16	28.00	=	99.97

If a pure substance, and found to be of constant composition, it may be classed as a massive manganesian variety of brucite.

Talktriplite.—This is also a massive substance of yellow or yellowish-red color occurring in grains the size of a pin head at Horrsjöberg. It is transparent, has a hardness of about 5, and contains phosphoric acid, iron, manganese, lime and magnesia, with some fluorine. As it was not separated from its matrix, no analysis of the pure substance was made. It is supposed to be a triplite containing lime and magnesia, but further examination seems to be necessary before classing it among accepted species. It occurs with lazulite, svanbergite and other phosphates.

DIABANTITE-VERMICULITE.—Professor B. K. Emerson describes a *diabantite-vermiculite* from a dyke of diabase near Turner's

Falls, Connecticut. The foliated chlorite known as diabantite frequently decomposes and then contains amygdules filled with a bronze-yellow substance which exfoliates largely before the blowpipe. The diabantite itself is regarded as an original product of the decomposition of the trap while still hot, while the so-called diabantite-vermiculite is of much more recent origin, being due to atmospheric alteration.

SALT WATER IN SULPHUR CRYSTALS.—Many of the flat crystals of sulphur from Catania, Sicily, contain enclosures of a colorless transparent liquid, in which gaseous bubbles may frequently be seen. Microscopic tubular cavities also traverse the flat laminæ of the crystalline masses of sulphur. Sylvestri finds the enclosed liquid to be a weak aqueous solution of sodium chloride and sulphate, with traces of potassium, calcium, barium and strontium chlorides. The total saline matter amounted to slightly over one per cent.

THE DISPERSION OF CHROMATE OF SODA.—M. Wyrouboff has shown that crystals of chromate of soda having four per cent. of water have very remarkable optical properties. When examined with converging polarized light a plate of this salt shows a curious system of curves very differently arranged on either side of the bissectrix. In the last number of the Bulletin of the Mineralogical Society of France, colored plates are given illustrating the irregular figures produced by polarized light. The irregularity of the curves is due to inclined dispersion combined with considerable difference in the position of the planes of the axes for different colors. It is a very striking example of inclined dispersion, no other substance being known to possess it to such a degree.

ALUMINIUM AS A BLOWPIPE SUPPORT.—The use of a plate of aluminium as a support for the assay in blowpipe operations, as advocated by Col. W. A. Ross, appears to possess a number of advantages over the usual block of charcoal.

The *black* sublimates formed by arsenic, antimony, lead, etc., invisible upon charcoal, can be distinguished upon the new support. Any sublimates formed can be scraped off in a pure condition for further examination, whereas upon charcoal there is always an admixture of ash. The danger of loss of the sublimate or assay, either by cracking of the charcoal, by blowing away, by admixture with white ash, or by re-sublimation on the incandescent charcoal, is greatly lessened by the use of aluminium as a support, and more minute quantities of a substance may thus be detected.

In practice, it is often necessary to place a small slip of charcoal between the assay and the aluminium plate, in order to obtain a sublimate.

The superior heat conduction of aluminium prevents it from combining with fusible metals, as is the case with platinum. For the same reason aluminium foil is stated to be better fitted than platinum foil for the fusion of alkaline carbonates, the detection of manganese, etc.

ERSBYITE.—This feldspar, hitherto regarded as an anomalous variety of doubtful existence, has recently been shown by F. J. Wiik, to be a potash microcline. The large percentage of lime given in former analyses is proved to be due to an admixture of calcite. After purification in weak acid, the following composition was found:

SiO_2	Al_2O_3	CaO	K_2O	Na_2O
66.18	19.52	.36	13.03	.91

The feldspar occurs in colorless crystals at Pargas, Finland, and is intimately associated with another feldspar, now shown to be andesite. The optical properties are identical with microcline, and the name ersbyite must be dropped from the list of species.

MINERALOGICAL NOTES.—N. H. Darton is giving, in the *Scientific American Supplement*, a popular account of the mineral localities and the minerals to be found in and around New York city. The articles are written in a familiar style, and will be of great assistance to beginners in mineralogy living near New York city. Professional mineralogists also will be glad to know the exact localities of the specimens in their cabinets, and will be interested in the full description of their method of occurrence.——The Proceedings of the Mineralogical and Geological Section of the Academy of Natural Sciences of Philadelphia are offered for sale at fifteen cents.——Crystallographers will be interested in the abnormal *diamond* crystals recently described and figured by Purgold of Dresden. One of these has eight projecting triangular points—the result of repeated twinning.——The second part of Professor Tschermak's "Lehrbuch der Mineralogie" (Vienna) has recently been issued. It is a valuable work, embodying the latest results of mineralogical research.——Selenium and tellurium have been found in the sulphur of Japan.

GEOGRAPHY AND TRAVELS.[1]

THE RESCUE OF THE CREW OF THE EIRA.—The steam whaler *Hope*, Captain Sir Allen Young, which sailed from the Scotch port of Peterhead about June 20th, to search for and relieve the crew of the *Eira*, has been most successful in its mission, having returned with all the members of the missing expedition on board. The *Eira* left Peterhead on the 14th of June, 1881. The ice that season reached very far south, and no opening could be found to enable her to get north until the middle of July. Franz-Josef's Land was reached on July 23, and the *Eira* steamed along the coast to within fifteen miles of Cape Ludlow. The ice was closely packed to the north, so it was decided to return to Gray

---

[1] Edited by ELLIS H. YARNALL, Philadelphia.